

L 47145-66

ACC NR: AR6000723

is assumed constant, and the author determines the deflection w . Then, using this expression for the deflection and the exact differential equations for equilibrium, the author refines the stresses. Two types of boundary conditions are considered: fixed and hinged edges. For both boundary conditions, approximate formulas are introduced for the critical value of the temperature

$$T_{ocr} = \frac{\beta^2 h^2 (n+1)(n+2)}{24(1+\nu) a R^3 [(n+1)a + (n+2)b]}$$

where $\beta = 3.8317$ for the fixed edges, $\beta = 2.049$ for the hinged edges. Formulas are obtained for the dimensionless deflection at the center in the absence of loads. These solutions are compared with known solutions obtained by the Ritz and Bubnov-Galerkin methods. From summary. [Translation of abstract]

SUB CODE: 20, 12

Card 2/2 afs

ARTYUKHINA, Aleksandra [Art'iukhina, Aliaksandra], Geroj Sotsialisticheskogo Truda, chlen Kommunisticheskoy partii Sovetskogo Soyuza s 1910 goda

Our "Pravda." Rab. i sial. 38 no.5:2-3 My '62. (MIRA 16:1)
(Russian newspapers)

1. ARTYUKHINA, A.T.
2. USSR (600)
4. Clay-Kalinin Region
7. Report on the detailed exploratory survey of the tile clay deposits for the "Pioneer" factory near the town of Kalinin. (Abstract) Izv. Glav. upr. geol. fonda, no. 2; 1947
9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

ARTYUKHINA, I. M.

3

Determination of trichloroethane in dichloroethane.
V. S. Efis and I. M. Artyukhina. Zavodskaya Lab. 21,
919-20(1953). Determination of trichloroethane in $(CH_2Cl)_2$ with
accuracy of 2.5% is made on the basis of different stability
of the compds. to bases. The sample (5 g.) is treated with
15 ml. 0.2N $Ba(OH)_2$ and 35 ml. pure MeOH, heated under
a reflux condenser protected with soda lime 2-2.5 hrs. at
30-40°, then titrated for residual $Ba(OH)_2$ with standard
HCl with methyl orange indicator. A blank run correction
is suitably made, best by using a calibration curve which
allows for the slight reaction of $(CH_2Cl)_2$. More concn.
 $Ba(OH)_2$ or 0.1N KOH cause too much cleavage of $(CH_2Cl)_2$
to be useful in this method. The soln. indicated above gives
but 0.4-0.7% cleavage of the dichloride. G. M. K.

ARTYUMHINA, N. A.

"Phenomena Occuring After Birth in Animals Irradiated Before Birth."

report presented at the Conference on influence of Ionizing Radiation upon the Higher Developed Parts of the Central Nerve System, Inst. of Higher Nervous Activity. AS USSR, 8-10 May 1958.

ARTYUKHINA, N.I.

Histopathological study of the central nervous system in white rats
in experimental streptococcal infection following prolonged sleep.
Trudy Inst.vyss.nerv.deiat. Ser.patofiziol. 3:336-347 '57. (MIRA 10:8)
(NERVOUS SYSTEM) (STREPTOCOCCUS)

USSR/Human and Animal Morphology - Pathological Anatomy.

S

Abs Jour : Ref Zhur Biol., No 5, 1959, 21645
Author : Artyukhina, N.I.
Inst : Institute of Higher Nervous Activity of the Academy
of Sciences USSR
Title : Histopathological Analysis of Central Nervous Sys-
tem Changes in Experimental Pneumococcal Infection
in White Rats
Orig Pub : Tr. in-ta vysshey nervn. deyat-sti AN SSSR, ser.
patofiziol., 1957, 3, 848-356
Abstract : No abstract.

Card 1/1

ARTYUKHINA, N.I.

Effect of ionizing radiation on the morphology of the central nervous system in rabbits in cases of a single local irradiation of the brain. Trudy Inst. vys.nerv.deiat. Ser. patofiziol. 4: 238-251 '58
(MIRA 11:12)

1. Iz kabineta morfologii mozga (zav. - prof. N.M. Aleksandrovskaya)
Instituta vysshey nervnoy deyatel'nosti AN SSSR.
(BRAIN)
(GAMMA RAYS--PHYSIOLOGICAL EFFECT)

ARTYUKHINA, N.I.

Histopathological changes in the central nervous system and internal organs in white rats following exposure to different doses of ionizing radiation in the region of the brain. Trudy Inst.vys. nerv. deiat Ser. patofiziol. 4:252-265 '58 (MDRA 11:12)

1. Iz kabinetu mofologii mozga (zav. - prof. N.M. Aleksandrovskaya)
Instituta vyshey deyatel'nosti AN SSSR.
(BRAIN)
(GAMMA RAYS--PHYSIOLOGICAL)

ARTYUZHINA, N.I., KRYACHKO, L.I. (Moskva)

Experimental streptococcal cardiac affections in white rats;
[with summary in English]. Arkh.pat. 20 no.9:37-42 S'58 (MIRA 11:10)

1. Iz laboratorii srovnitel'noy patofiziologii i eksperimental'noy
terapii vyshey nervnoy deyatel'nosti zhivotnykh (zav. - prof.
L.I. Kotlyarevskiy) i kabineta morfologii tsentral'noy nervnoy sistemy
(zav. - prof. M.M. Aleksandrovskaya) Instituta vyshey nervnoy deyatel'no-
sti AN SSR (dir. - chlen-korrespondent AMN SSSR prof. V.S. Rusinov).

(HEART DISEASE, experimental,
streptoc. lesion in white rats (Rus))
(STREPTOCOCCAL INFECTIONS, experimental
heart lesions in white rats (Rus))

ARTYUKHINA, N.I. (Moskva)

Histological changes of the central nervous system in experimental traumatic brain injury. [with summary in English]. Arkh,pat.
20 no.10:69-73 '58
(MIRA 11:12)

1. Iz Instituta vysshey nervnoy deyatel'nosti AN SSSR (dir.
deystvitel'nyy chlen AMN SSSR prof. A.G. Ivanov-Smolenskiy, zav.
laboratoriyy - prof. M.M. Aleksandrovskaya).
(DIENCEPHALON, physiol.)

eff. of exper. lesions on CNS in dogs (Rus)
(CENTRAL NERVOUS SYSTEM, physiol.)
eff. of diencephalic lesions in dogs (Rus)

BORUKAYEV, R.K.; ARTYUKHINA, N.I.

Disorder of the higher nervous activity and morphological changes
in the central nervous system in adrenalectomized animals. Probl.
endok. i gorm. . 5 no.3:17-25 My-Je '59. (MIRA 12:9)

1. Iz laboratorii srovnitel'noy patofiziologii vysshey nervnoy
deyatel'nosti (zav. - prof.L.I.Kotlyarevskiy) i kabineta morfologii
tsentral'noy nervnoy sistemy (zav. - prof.M.M.Aleksandrovskaya)
Instituta vysshey nervnoy deyatel'nosti Akademii nauk SSSR (dir. -
prof.L.G.Voronin).

(CENTRAL NERVOUS SYSTEM, physiol.

higher nerv. activity, eff. of adrenalectomy
in rats (Rus))

(CEREBRAL CORTEX, physiol.

eff. of adrenalectomy in rats (Rus))

(ADRENALECTOMY, eff.
on cerebral cortex funct. & higher nerv.
activity in rats (Rus))

ARTYUKHINA, M. I.

Morphological changes in the central nervous system and internal organs of white rats treated with prolonged sleep therapy in experimentally induced infections of a highly virulent streptococcus. Trudy Inst.vys.nerv.deiat.Ser.patofiziol. 6:324-339
'59.

(MIRA 12:10)

(NERVOUS SYSTEM)
(STREPTOCOCCAL INFECTIONS)
(SLEEP--THERAPEUTIC USE)

ARTYUKHINA, N.I.

Morphological study of the brain and internal organs of white rats treated with penicillin in infections experimentally induced with a highly virulent hemolytic streptococcal culture.
Trudy Inst.vys.nerv.deiat.Ser.patofisiol. 6:340-349 '59.

(MIRA 12:10)

(BRAIN)
(STREPTOCOCCAL INFECTIONS)
(PENICILLIN)

ARTYUKHINA, N.I.

Morphological character of the structural changes in the central nervous system of white rats during postnatal development following irradiation of their mothers during pregnancy. Trudy Inst. vys.nerv.deiat. Ser.fiziol. 4:257-270 '60. (MIRA 13:7)

1. Iz Kabineteta morfologii mozga Instituta vyschey nervnoy deyatel'nosti AN SSSR. Zaveduyushchiy kabinetom - N.M. Aleksandrovskaya. (NERVOUS SYSTEM) (GAMMA RAYS--PHYSIOLOGICAL EFFECT)

ARTYUKHINA, N.I.

Structural characteristics of the synapses of the motor area
of the cortex in rats. Arkh. anat., glist. i embr. 49 no.8;
21-28 Ag '65.

(MIRA 18:9)

1. Laboratoriya morfologii tsentral'noy nervnoy sistemy (zav.-
prof. M.M. Aleksandrovskaya) Instituta vysshyey nervnoy deyatel'-
nosti i neyrofiziologii AN SSSR, Moskva.

KHOLODOV, I.M. et al. TIKHONOV, N.M.

Luminosity function of the stars in the Eridanus cluster.
Zhur. zr no. 5:968-973 S-0 164.

1. Gosudarstvennyy astronomicheckiy institut im. V.V. Batina
(GAI) 1/410

ARTYUKHINA, N.M.; KARIMOVA, D.K.

Investigating the KIM-3 measuring instrument. Soob.GAISH
no.104:21-38 '61.
(Optical instruments) (MIRA 15:3)

ARTYUKHINA, N. M.

"Nebula Andromeda." Trudy GAISH 16, no. 1, 1949.

SO: MLRA. May 1952

ARTYUKHINA, N. M.

ARTYUKHINA, N. M. - "Calculation and Investigation of the Proper Movement of Stars in the Region of North Pole Galaxies." Sub 24 Dec 52, Moscow Order of Lenin State U imeni M. V. Lomonosov. (Dissertation for the Degree of Candidate in Physicomathematical Sciences).

SO: Vechernaya Moskva January-December 1952

"APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000102310003-1

ARTYUKHINA, N.N.

Proper motions of 152 stars in the region of the galactic north pole.
Soob.GAISH no.81:3-19 '52.
(Stars--Proper motion) (MLRA 7:5)

APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000102310003-1"

ARTYUKHINA, N. M.

USSR/Astronomy - Stellar Motion Nov/Dec 53

"Determination and Investigation of Proper Motion
of Stars in Vicinity of North Pole of the Galaxy,"
N.M. Artyukhina, State Astron Inst im Shternberg

Astron Zhur, Vol 30, No 5, pp 625-630

This work is done with the purpose of preparing
a catalog of proper motions of weak stars in vi-
cinity of the north pole. Measurements were ob-
tained for 1073 stars in 12^h 12^m to 12^h 32^m and
+24° to +29°. Indebted to Prof P.P. Parenago.
Rec 10 Jun 53.

277m72

ARTYUKHINA, N. M.

Subject : USSR/Astronomy AID P - 376
Card 1/1 Pub. 8 - 6/12
Author : Artyukhina, N. M.
Title : Proper Motions of the Stars of the Association Cepheus II
Periodical : Astron. zhur., v. 31, 3, 264-266, My-Je 1954
Abstract : The work is devoted to further precision of proper motions of the stars of the Cepheus II association. B. E. Markaryan's deduction about the expansion of this stellar group is confirmed. Because of the comparative proximity of the group (about 600 parsecs from the sun), data of 17 of its stars, taken from German, British and two American catalogs, were studied, and inaccuracies in the stars' proper motions were corrected for the inaccurate precession constant of Newcomb. A table and two graphs are given. 2 references (one Russian, 1953).
Institution : State Astronomical Institute im. Shternberg
Submitted : November 25, 1953

ARTYUKHINA, N.M.

Determining and analysing proper motions of stars in the region of
the galactic north pole. Trudy GAISH 26:3-123 '55. (MLRA 10:3)
(Stars--Proper motion)

ARTYUKHINA, N.M.

Proper motions of stars in the region of clusters M71 and H20.
Trudy GAISH 27:3-35 '56. (MIRA 12:1)
(Stars--Proper motion)

ARTYUKHINA, N.M.

Expansion of the association Cepheus 2. Trudy GAISH 27:203-209
'56. (MIRA 12:1)
(Stars--Distribution)

3(1)

AUTHORS:

Artyukhina, N.M. and Kholopov, P.N.

SOV/33-35-4-3/25

TITLE:

The Distribution of Stellar Density in the Open Star Cluster M37 (Raspredeleniye zvezdnoy plotnosti v rasseyannom zvezdnom skoplenii M37)

PERIODICAL:

Astronomicheskiy zhurnal, 1958, Vol 35, Nr 4, pp 524-547(USSR)

ABSTRACT:

The authors present a detailed investigation of the apparent and space distribution of stars of different types p (red giants), s-q+t (brightest stars), u and w in the open cluster M37. The investigations are based on the position, magnitude and colour index data of 1885 stars given by Zeipel and Lindgren [Ref 2]. The results are represented in numerous diagrams, and compared with each other. The curves of equal apparent density show that the groups of stars have different centers of concentration which are determined from these curves. The main object is the study of the radial distribution of the space density $f(r)$ of the single groups with respect to their centers of concentration. The core of the cluster is the same for all groups. The core contains for each group a central zone of practically constant density and a zone of maximum gradient of density.

Card 1/2

The Distribution of Stellar Density in the Open Star Cluster M37 SOV/33-35-4-3/25

which is called the inner zone of the core. These zones are most sharply defined for the groups p,s and do not coincide for the four groups under consideration. The authors particularly direct to the uncertainty in the results which is caused by their very sensitive dependence on the adopted positions of the centers of concentration.

There are 13 figures, 8 tables, and 11 references, 3 of which are Soviet, 3 American, 3 Swedish, and 2 German.

ASSOCIATION: Gos. astronomicheskiy in-t imeni P.K.Shternberga
Astronomicheskiy sovet AN SSSR (State Astronomical Institute
imeni P.K.Shternberg Astronomical Council S USSR)

SUBMITTED: April 30, 1957

Card 2/2

3(1)

AUTHORS: Artyukhina, N.M., and Karimova, D.K. SOV/33-36-1-15/31
TITLE: Meridian Proper Motions of 161 Stars in the Region of the Belt of Orion
PERIODICAL: Astronomicheskiy zhurnal, 1959, Vol 36, Nr 1, pp 121-128 (USSR)
ABSTRACT: In the extensive table 1 the authors list the meridian proper motions of 161 stars in the region of the belt of Orion being of the spectral types O to A0; the probable errors are <+0%.010. For 140 stars which can be counted as probable members of the Orion association the dispersion of proper motions and tangential velocities in each coordinate is determined under the assumption that the distance to the association is 400 pc. The dispersion of tangential velocities in both coordinates is 8-9 km/sec; this result is in good agreement with other results. The authors use publications of P.I.Bakulin [Ref 4] and P.P.Parenago [Ref 5]. There are 2 tables, 1 figure, and 5 references, 4 of which are Soviet, and 1 German.
ASSOCIATION: Gosudarstvennyy astronomicheskiy institut imeni P.K.Shternberga (State Astronomical Institute imeni P.K.Shternberg)
SUBMITTED: April 11, 1958

Card 1/1

3.1430

78013
SOV/33-37-1-13/31

AUTHOR: Artyukhina, N. M.

TITLE: Photographic Proper Motions and the Mean Parallax
of RW Aur-Type Variable Stars

PERIODICAL: Astronomicheskiy zhurnal, 1960, Vol 37, Nr 1,
pp 95-100 (USSR)

ABSTRACT: In her previous work (this journal, 36, Nr 5, 1959)
the author studied the meridian circle absolute
proper motions of 21 variables of RW type. The mean
parallax obtained for these stars disagreed with the
value obtained by T. A. Uranova who used proper motions
that had been derived photographically for this purpose.
The present work demonstrates that photographic proper
motions of these stars when reduced to absolute
motions statistically give a value of the mean parallax
in good agreement with the value derived from meridian
circle observations. The proper motions of 21 stars
were derived by comparing the positions from photographs
obtained with the 38-cm astrographic catalogues. The

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Photographic Proper Motions and the Mean
Parallax of RW Aur-Type Variable Stars

78013
SOV/33-37-1-13/31

mean parallax of these stars was found to be $0''.0026$,
in good agreement with the previous value of $0''.0035$.
The author accepts the weighted mean value of $0''.0030$;
this corresponds to a distance of 300 parsecs. It
compares favorably with the estimated distance of the
T-associations and confirms the previously expressed
opinion that Uranova used erroneous values of absolute
proper motions in her study. There are 6 tables; and
6 Soviet references.

ASSOCIATION: Sternberg State Astronomical Institute (Gosudarst-
vennyy astronomicheskiy in-t imeni P. K. Shternberga)

SUBMITTED: June 24, 1959

Card 2/2

ARTYUKHINA, N.M.

Proper motions of 332 stars in the vicinity of open star cluster
NGC 7209. Trudy GAISH 30:196-208 '61. (MIRA 14:8)
(Stars--Proper motion)

ARTYUKHINA, N.M.

Proper motions of 392 stars in the region of open star cluster NGC
5855. Trudy GAISH 30, 219-230 '61. (MIRA 14:8)
(Stars--Proper motion)

ARTYUKHINA, N.M.

Proper motions of three W UMa-type stars in the region of
the Pleiades cluster. Per.zvezdy 13 no.5:366-369 Je '61.

(MIRA 15:8)

1. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga.
(Stars, Variables)

ARTYUKHINA, N.M.; KHOLOPOV, P.N.

Distribution of stellar density in the cluster M 67. Astron.zhur.
38 no.6:1039-1054 N-D '61. (MIRA 14:11)

1. Gosudarstvennyy astronomicheskiy institut im. P.K.Sternberga.
(Stars--Cluster) (Stars--Density)

A.YUZHINA, N.M.

Proper motion of the star HD + 40°124 associated with the nebula
S 213. Astron.zhur. 39 no.3:549-550 My-Je '62. (MIRA 15:5)

1. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga.
(Stars---Proper motion) (Nebulae)

ARTYUKHINA; N.M.

Distribution of stellar density in the open Praescepe
cluster. Astron.zhur. 39 no.6:1050-1057 N-D '62. (MIRA 15:11)

1. Gosudarstvennyy astronomicheskiy institut im.
P.K. Shternberga.
(Stars--Density)

ARTYUKHINA, N.M.

Positions and proper motions of several novae. Astron. zhur. 40
no.4:682-690 Jl-Ag '63. (MIRA 16:8)

1. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga.
(Stars, New)

ARTYUKHINA, N.M.; KHOLOPOV, P.N.

List of novae recommended for the determination of coordinates
and proper motions. Astron. zhur. 39 no.6:1129-1131 N-D '62.
(MIRA 15:11)

1. Gosudarstvennyy astronomicheskiy institut im.
P.K. Shternberga.
(Stars, New)

ARTYUKHINA, N.M.; KHOLOPOV, P.N.

Open cluster M 37 and the coronas of star clusters. Astron. zhur. 40 no.6:1101-1111 N-D '63. (MIRA 16:12)

1. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga.

ARTYUKHINA, N.M.

Some new possible members of Praesepe cluster. Astron.zhur. 41
no.2:414-416 Mr-Ap '64. (MIRA 17:4)

1. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga.

ARTYUKHINA, N.M.; KHOLOPOV, P.N.

Structure, population and dimensions of the star cluster NGC
752, Astron. zhur. 41 no.4:743-749 Jl-Ag '64 (MIRA 17:8)

1. Gosudarstvennyy astronomicheskiy institut im. P.K. Shtern-
berga.

ATTY GENERAL, N.Y., FEBRUARY, 1955.

Reinstated to the system of legal counsel in the FCC 7/13 cluster.
Attachment 42 and 100% -100% and 100%.

(MIRA 18:10)

1. Considerability and reemployment of Mr. Fred Hoberman.

ARTYUKHINA, N.M.

Structure of Praesepe cluster. Astron. zhur. 43 no. 1:132-137
Ja-F '66 (MIRA 19:2)

1. Gosudarstvennyy astronomicheskiy institut imeni P.K. Shternberga. Submitted June 7, 1965.

ARTYUKHOV, A.

More about the "Fram-11" gun camera. Sov. foto 22 no. 12:37
D '62. (MIRA 16:1)

(Cameras)

SVESHIKOVA, A.F., kand. veter. nauk; TARKHANEYEV, P.F., nauchnyy sotrudnik;
RAKHVALOV, Ye.M. (Omskaya oblast'); ARTYUKHOV, A.G. (Omskaya
oblast'); BELYAYEV, V.I. (Omskaya oblast')

Testing trichlorometaphos-3 against warble flies. Veterinarija
42 no.11:49-50 N '65. (MIRA 19:1)

1. Sverdlovskaya nauchno-issledovatel'skaya veterinarnaya
stantsiya (for Sveshnikova, Tarkhanayev).

RASPOPOV, I.V.; LUKASHOV, G.G.; PLISKANOVSKIY, S.T.; ARTIYUKHOV, B.N.;
TARASOV, D.A.; ARIKHBAYEV, V.V.; Prinimali uchastiye: ZENYUKOV,
V.P.; NEMTSOV, N.S.; GODLEVSKIY, A.I.; LEVCHENKO, G.F.;
DEGTYAREVA, Z.I.; GORLACH, A.A.; YAKUSHECHKIN, Ye.I.

Intensifying the sintering process by air preheating and by
improving the performance of exhaust fans. Stal' 23 no.8:
679-682 Ag '63. (MIRA 16:9)

1. Zhdanovskiy metallurgicheskiy institut i metallurgicheskiy
zavod "Azovstal'."

(Sintering)

"APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000102310003-1

SAFRONOV, Yu.L.; ARTYUKHOV, F.N.

Automatic device for wrapping rayon packages. Khim. volok. no.1:
26-27 '62. (MIRA 18:4)

APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000102310003-1"

ARTYUKHOV, G.

The contest of hunting photographs is already a tradition.
Sov.foto 21 no.12:42-43 D '61. (MIRA 14:12)
(Photography—Competitions)

ARTYUKHOV, G.

Is there a need for "photographic studies" in newspapers? Sov.foto
22 no.8:28-29 Ag '62. (MIRA 15:7)
(Photography, Journalistic)

ARTYUKHOV, G.G., elektromekhanik

Deficiencies of the TGK-3 thermoelectric generator. Avtom., telem. i
sviaz' 2 no.5:40 My '58. (MIRA 11:5)

1. Kotel'nikovskaya distantsiya signalizatsii i svyazi Severo-
Kavkazskoy dorogi.

(Radio--Receivers and reception--Equipment and supplies)
(Thermoelectricity)

ARTYUKHIN, G. YA.

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3

International Conference on the Health Care of Aborigines, No., China, 1965
National scientific and technical publication system (Ministry of Science and Technology)
Beijing, Aborigines, 1965. 52 p. (Series: The Study, Vol. 2)
6,000 copies printed.

Ms. (Title page) L.I. Alliluyev, Academician V.I. Vekua, Academicians and
S.-A. Vinogradov, Candidates of Physical and Mathematical Sciences 14. of this
volume L.I. Alliluyev and B.V. Kapitza, Candidates of Physical and Mathematical
Sciences 14. of this volume

Proceedings of the Annual Meeting, 1947, Vol. 20, No. 1, March.

Comments: Part I contains 27 papers dealing with plasma physics and concerned with terrestrial phenomena and Part II contains 26 papers on nuclear physics dealing with problems of particle composition and of atomic energy sources. The first volume has 740 pages and the second has 720.

Part II deals with particular problems in the field. The remaining papers in Part II deal with general problems in molecular physics, and in the final section of Part II there are also some contributions dealing with the statistics of many atoms and their properties.

(Chairman Director and Secretary Treasurer), Valence (U.), Valence, Massachusetts 01224; Chairman Director and Secretary Treasurer), Valence (U.), Valence, Massachusetts 01224; Chairman Director and Secretary Treasurer), Valence (U.), Valence, Massachusetts 01224; Chairman Director and Secretary Treasurer), Valence (U.), Valence, Massachusetts 01224.

ment and life of *Tarpeia*. The other 15 volumes of the present series presented at the Conference by non-Italian scholars. In the present volume examples between the English and German language edition of the present day have been used. In some articles the terms are not satisfactorily explained and the reader is referred to the original article.

the same period, the number of patients with malignant neoplasms increased from 1,222 in 1950 to 2,222 in 1960, or 82 percent.

Department of Health Information Sector (cont.)
2007/2008

207
G. W. Goss, and L. M. Chamberlain, "Growth and Decay Studies in the γ -Ray Decay of Benzene and Acetophenone" (Report 2925);
R. H. Johnson and J. C. Sauerwein, "V.L. Brooks, P.T.
Patterson, R.J. Pritchard, T.R. Rector, R.C. Legg, P.J. Schatzki, and
J.W. Shultz, "A New Method for Determining the Number of
Molecules in a Sample" (Report 2926).

272
Dr. T. S. Ladd.
Tucker, and similar sections covered by sandy loam (Report 2379)
Gardiner, T. V., A. E. Gardner, T. S. Ladd, and T. T. Shattock, Specie-

20
International Institute of Social Studies and Directorate of
Economic Affairs (Report 2009)
International Institute of Social Studies and Directorate of Economic Affairs, The Hague, The Netherlands, 2009.

200
Kremensk, G.D., G.B. Krasnolutsky, G.P. Lopatin, A.I. Margolit,
V.N. Ponomarenko, V.L. Rabinov, V.I. Slobodin, V.E. Trofimchuk,
V.V. Vaynshteyn, V.A. Surovtsev, V.M. Tishchenko, and V.N. Yerushal'my.
"Electron-Deficient Rare Earth Compounds" [Russian translation].
Russ. Chem. Rev., 1977, **56**, No. 12, p. 1071.

J. E. BURGESS, V. C. DUNLOP, R. H. FERGUSON, D. L. GIBSON, AND J. E. MCNAUL Measurements of Green Sections for Rock Mechanics Projects 2239

APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000102310003-1"

ARTYUKHOV, G. Y., MOGILNER, A. I., PROKHOROV, Y. A., STEKLOVSKIY, V. M.,
CHERNOV, L. A., LEYPUNSKIY, A. I., AND KUVENTSOV, V. A.

"Experimental studies of some of the physical features of
Beryllium-moderated intermediate reactors."

Report submitted for the IAEA Seminar on the Physics of East and Intermediate
Reactors, Vienna, 3-11 Aug 1961.

Acad. Sci. USSR Moscow

ARTYUKHOV, G.

Readers' snapshots. Sov. foto 17 no. 3:40-42 Mr '57. (MLRA 10:6)
(Photographs)

ARTYUKHOV, G.

The child's world. Sov. foto 17 no.9:27-29 S '57. (MIRA 10:9)
(Photography of children)

ARTIUKHOV, G.IA.

Fotografirovaniye zhivotnykh (Photography of animals). Methodika i tekhnika fotosъемki s.-kh. zhivotnykh. Moskva, Sel'khozgiz, 1954. 192 p.

SO: Monthly List of Russian Accessions, Vol 7, No. 8, Nov. 1954

BRITYUKHOV G-Y

卷之三

214 Studies on the Structure of Extensive Atmospheric Showers. G. Ya. Artyukhov and L. Kh. El'dus. Doklady Akad. Nauk S.S.R. 69, 629-31 (1949) (in Russian).

In the light of recent investigations, the extensive atmospheric showers cannot be considered as mere cascades of electrons and photons; the part played by heavy penetrating and strongly ionizing particles in the generation and further history of these showers is being increasingly emphasized. However, the experiment of two ionization chambers (Rasorenov et al., Doklady Akad. Nauk S.S.R. 60, 1531(1948)) recording, as a rule, pulses of unequal intensity, can be interpreted not only as a proof of the presence of heavy particles, but also as an indication of some narrow dense beams of relativistic particles present in the general structure of an extensive shower of lesser density. In order to decide between the two possibilities, the authors measured coincidences C_8 and C_{12} in two groups of six counters radially arranged. By using brass filters and by varying the distance between the two counter groups, the conclusion was reached that the presence of narrow showers alone cannot account for the inequality of pulses in two ionization chambers placed in an extensive atmospheric shower.

ASH-ISA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000102310003-1"

PA 149T78

USSR/Nuclear Physics - Radiation,

21 Sep 49

Cosmic

Electron -

Photon Com-

ponent

"Formation of High-Energy Electrons and Photons
in the Lower Atmospheric Strata by Cosmic Radia-
tion." Ya. G. Artukhov, G. T. Zatspin, I. I.
Sarycheva, L. Kh. Rybin, Phys Inst imeni P. N.
Lebedev, Acad Sci USSR, 31 pp

"Dok Ak Nauk SSSR" Vol LXVIII, No 3

149T78

USSR/Nuclear Physics - Radiation, 21 Sep 49
Cosmic (Cont'd)

Describes study of high-energy electron-photon
component conducted in summer 1948 on the Pamirs.
According to experimentally confirmed hypothesis,
secondary nuclear-active particles are formed
when special showers are generated, causing a
nucleocascade process. Fundamental significance
of this process must be admitted not only in
development of wide showers but also in formation
of high-energy electron-photon component in lower
atmosphere. Submitted by Acad D. V.
Skobel'tsyn 22 Jul 49.

149T78

ARTYUKHOV, G. YA.

PA 157T74

USSR/Nuclear Energy - Cosmic Rays
Showers

11 Nov 49

"Generation of Electron-Photon Components of
High Energy," G. Ya. Artyukhov, G. T. Zatsepin,
I. I. Sarycheva, L. Kh. Rydus, Phys Inst imeni
Lebedev, Acad Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol LXIX, No 2

Confirms previous conclusion that appearance
at average heights of high-energy electrons is
generally explained by their generation in the
depths of the atmosphere by nuclear-active par-
ticles composing wide atmospheric showers

USSR/Nuclear Energy - Cosmic Rays
(Contd) 11 Nov 49

("special" showers in the air). Data used was
gathered in summer 1948 at 3,860 meters eleva-
tion with aid of hodoscopes. Electrons and
photons studied had energies as high as
2-3 · 10⁹ ev. Submitted 22 Jul 49 by Acad
D. V. Skobel'tsyn.

157T74

ARTYUKHOV, I.A., inzh.; YURGENSON, K.A., inzh.

Utilization of casing-head gas. Bezop. truda v prom. 4 no.12:
16-17 D '60. (MIRA 14:1)

1. Neftegazovoye upravleniye Grozneftegaz.
(Gas, Natural)

ARTYUKHOV, I. K. BRUY, A. M. TSYMBAL, V. E.

42438. Rezul'taty izucheniya trauopl'nykh sevooborotov. B SP: osnovnye vyyody
Po polevym opytam Za 1945-1947 GG (Ukr. Nauk.-Issled. In-T zernovogo Khoz-Za
Im. Kuybysheva, Erast. opyt. pole). Dnepropetrovsk, 1948, S. 19-30.

ARTYUKHOV, I. K., KATRICH, N.I.I. MOZHARA, G.M.

42446. Sposoby Effektivnogo Ispolzovaniya Mineralnykh Udobreniy pod
yarovuyu pshenitsu. V SB: Osnovnyye vyvody Po polevym opytam ZA 1945-1947 GG
(Ukr. Nauch-Issled. In-T zernovogo Khoz-Va IM. kuybysh eva.
erast. opyt. pole) Dnepropetrovsk, 1948, S. 42-48.

ARTYUKHOV, I. K. BORISONIK, Z. B. , STOEVUN, I. F.

42445. Sroki i sposoby uneseniya mineral'nykh udobreniy pod yachmen'
V SB: Osnovnye vyyody po polevym optyam Za 1945-1947 GG. (Ukr. Nauch-Issled.
In-T Zernovolo Khoz-VA IM. kuybysheva. Erast. Optyt. Pole). Dnepropetrovsk, 1948,
S. 49-51.

ARTYUKHOV, I. K.

Fertilizing a grass mixture at the time of summer sowing. Agrobiologija, No. 1, 1952. Kandidat Sel'skokhozyaystvennykh Nauk. Ukrainskiy Nauchno-issledovatel'skiy Institut Zernovogo Khozyaystva, g. Dnepropetrovsk.

SO: MLRA. June 1952.

1. ARTIUKHOV, I.K.; TURCHIN,V.V.
2. USSR (600)
4. Fertilizers and Manures
7. Importance of granulated fertilizers in increasing the yield of winter wheat on chernozem soils of the steppe zone of the Ukrainian S.S.R. I.K. Artiukhov, V.V. Turchin, Sov.agron. 11 no. 4, 1953.
9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Unc1.

ARTYKHOV, I. K.

USSR/Cultivable Plants - Grains.

M-2

Abs Jour : Ref Ukr - Biol., No 3, 1953, 19734
Author : Artyukhov, I.K.
Inst : Ukrainian Scientific Research Institute of Grain Economy.
Title : Methods of Fertilizing Corn on the Chernozem Soils of the
Ukrainian Steppes.
Orig Pub : Udobraniye i urozhay, 1956, No 4, 12-18.

Abstract : The results are given of work conducted (1949-1955) on the test plots of the Ukrainian Scientific Research Institute of Grain Economy. The greatest increase in grain yield (up to 4.5 centners/hectare) was achieved by applying mineral fertilizers to the preceding crop and manure to the corn itself, the manure giving better results when applied in autumn than when applied in spring. When granulated P₂O₅ in a dose of 25-50 kilograms/hectare, was applied 4-5 cm.

Card 1/2

Artyukhov, I.K.

USSR/Soil Science - Mineral Fertilizers.

J-4

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10524

Author : Artyukhov, I.K.

Inst : Academy of Science USSR

Title : Combining Manure and Mineral Fertilizers in Field-Crop Rotation on the Steppes of the USSR

Orig Pub : Mestn. organ. udobreniya USSR, Kiyev, Akad Nauk USSR, 1957, 27-44.

Abstract : The author discusses the influence of manure, when combined with mineral fertilizers, on grain crop yields and on their phasal development. His findings are based on the results of many years of experiments conducted on the Erastov Experimental Field (Dnepropetrovskaya oblast') and at the Zherebkov Sci Res Station of Field Husbandry

Card 1/2

ARTYUKHOV, I.K.

USSR/Cultivated Plants - Grains.

M-2

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91605

Author : Artyukhov, I.K.

Inst : AS Ukrainian SSR

Title : The Influence of the Joint Application of Manure and
Mineral Fertilizers on the Winter Wheat Yield in Relation
to the Preceding Crops.

Orig Pub : V sb.: Mesti. organ. udobreniya USSR. Kiyev, AN USSR, 1957,
66-75.

Abstract : Conclusions are drawn from experimental results made by
the Ukraine Institute of Grain Economy and many experi-
ment stations on black soils of Ukraine SSR Steppe Zone.
An increase in the winter wheat yield on fallows was noted
when mineral phosphorous and potassium fertilizers were
applied together with manure under the plant.

Card 1/2

- 19 -

Card 2/2

ARTYUKHOV, I. K.

USSR / Cultivated Plants. Cercals.

M

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34657

Authors : Artyukhov, I. K.; Zolotov, V. I.; Ryabushko, G. V.

Inst : Academy of Sciences USSR (kiev)

Title : Effectiveness of Organic and Mineral Fertilizers in Basic and Cluster Applications to Corn and Sunflowers.

Orig Pub : V. sb.: Mestn. organ. udobreniya USSR, Kiev, AN USSR, 1957, 76-86.

Abstract : No abstract.

Card 1/1

ARTYUKHOV, I.K., kand. sel'skokhozyaystvennykh nauk; RYABUSHKO, G.V.

Increasing the effect of mineral and organic fertilizers on sunflowers
in the steppe zone of the Ukrainian S.S.R. Agrobiologija no.2:95-100
Mr-Apr '58. (MIRA 11:4)

L. Vsesoyuznyy nauchno-issledovatel'skiy institut kukuruzы, Dnepro-
petrovsk.
(Ukraine---Sunflowers) (Fertilizers and manures)

ARTYUKHOV, Iosif Konstantinovich, kand. sel'khoz.nauk: ZADONTSEV, A.I.,
zasl. deyatel' nauki URSR, akademik, red.; LIVZNSKAYA, O.I.
[Livenko, O.I.], red.; GLUSHKO, G.I. [Glushko, H.I.], tekhn.red.

[Effective measures for corn fertilization] Efektyvni za-,
khody udobrennia kukurudzy. Dnipropetrovs'k, Dnipropetrovs'ke
kryzhkove vyd-vo, 1961. 24 p. (MIRA 15:7)

1. Direktor Vsesoyuznogo nauchno-issledovatel'skogo instituta
kukuruzy i Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk
im. V.I.Lenina (for Zadontsev).
(Ukraine--Corn (Maize))—Fertilizers and manures)

ARTYUKHOV, I.K., kand. sel'skokhoz. nauk

Effectiveness of fertilizers in the steppe of the Ukraine.
Zemledelie 26 no.1:26-33 Ja'64. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kulmuzy.

ARTYUKHIN, V. M.
2A

Utilization of Baltic shales for the energy supply of Leningrad and surroundings [I. M. Artukhov. *Fizika Teplois, Za 4, No. 4, 17-21(1971)]. The main product of processing Baltic shale is gas rather than tar. Shale is coked at 900° in a furnace with 8 chambers. Typical yields per ton of shale and calorific value of the products are: gas, 450,000 cu. m.; 1,000,000 kcal./cu. m.; tar, 24 kg., 10,000 kcal./kg.; gasoline vapor, 0.0 kg., 10,000 kcal./kg.*

Nancy Corbin

ARTYUKHOV, I. M.

PA 18T6

USSR/Shale
Fuel conservation

Aug 1947

"Efficient Utilization of Baltic Shale," I. M.
Artyukhov, 3 pp

"Za Ekonomiyu Topliva" No 8

Old method of incinerating schists in layer furnaces was most uneconomical. Therefore, there was introduced a low-temperature distillation of shale, conducted in tunnel furnaces, where temperatures rise to 450 - 550° C. Diagrams of furnaces. There is also a method of continuous gasification of shale which is carried out by means of 1 inch-type gas generators.

18T6

ARTYUKHOV, Ivan Mikhaylovich, kandidat tekhnicheskikh nauk; SHORIN,
Serafim Nikolayevich, doktor tekhnicheskikh nauk; NOVOCHADOV, A.D.,
redaktor; KONYASHINA, A.D., tekhnicheskiy redaktor

[Gas supply] Gazosnabzhenie. Moskva, Izd-vo Ministerstva kommunal'-
nogo khoziaistva RSFSR, 1956. 325 p.
(Gas supply) (MLRA 9:9)

KOKURIN, A. D., ARTYUEHOV, I. M., ZVYAGINA, M. F.

Continuous iron and steam method for the production of hydrogen.
Trudy LTI no.51:30-38 '59. (MIRA 1):8)
(Hydrogen) (Iron ores) (Coal)

ARYUKHOV, I.M.

New method of converting hydrocarbons with the purpose of obtaining gases to be used in organic synthesis. Izv.vys.ucheb.zav.; khim.i khim.tekh. 2 no.5:784-789 '59. (MIRA 13:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov - VNIINFTEKhIM.
(Hydrocarbons)
(Chemistry, Organic--Synthesis)

ARTYUKHOV, I.M.

Modeling of reaction systems in certain processes of the
heterogenous conversion of hydrocarbons. Zhur. prikl.
khim. 33 no.11:2512-2520 N '60. (MIRA 14:4)

I. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimi-
cheskikh protsessov.
(Hydrocarbons)

PHASE I BOOK EXPLOITATION SOV/5480

Artyukhov, Ivan Mikhaylovich

Okislitel'naya konversiya uglevodorodov (Oxidative Conversion of Hydrocarbons)
Leningrad, Gostoptekhizdat, 1961. 90 p. (Series: Vsesoyuznyy nauchno-
issledovatel'skiy institut neftekhimicheskikh protsessov. Trudy, vyp. 4)
Errata slip inserted. 3,000 copies printed.

Sponsoring Agency: Gosudarstvennyy komitet Soveta Ministrov SSSR po khimii.

Scientific Ed.: D.V. Mushenko; Executive Ed.: M.G. Deshalyt; Tech. Ed.: I.M.
Gennad'yeva.

PURPOSE: This book is intended for engineers and scientists in the petroleum and
chemical industries.

COVERAGE: The book contains the transactions of the All-Union Scientific Research
Institute for Petroleum Chemistry Processes (VNIINeftekh) and treats problems
in applied and theoretical chemistry. The book is part of a series to be pub-
lished under the general title Termicheskaya i katalicheskaya konversiya

Card 1/4

Oxidative Conversion of Hydrocarbons

SOV/5480

uglevodorodov (Thermal and Catalytic Ccnversion of Hydrocarbons). The work treats processes of hydrocarbon conversion to produce initial products for petroleum chemical industries. Experimental data and theoretical problems in the oxidative conversion of hydrocarbons are reviewed, and some generalizations on pyrolysis and dehydrogenation are made. Special attention is given to a purportedly new method of hydrocarbon conversion developed under the guidance of the author [Refs. 1 - 4] and based on the use of iron as an oxygen carrier. The author thanks V.I. Lyubomirova, V. I. Sedova, N. T. Kiryakina, and A.P. Khitrov. There are 9 references, all Soviet.

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| Ch. I. Raw Materials Used in Oxidative Conversion | 5 |
| Ch. II. Theoretical Features of Oxidative Hydrocarbon-Conversion Processes | 10 |

Card 2/4

ARTYUKHOV, Ivan Mikhaylovich; MUSHENKO, D.V., nauchnyy red.; DUSHALYT, M.G.,
vedushchiy red.; GENNAD'YEVA, I.M., tekhn.red.

[Oxidative conversion of hydrocarbons] Okislitel'naia konversija
uglevodorodov. Leningrad, Gos. nauchn.-tekhn.izd-vo neft. i gorno-
toplivnoi lit-ry. Leningr. otd-nie, 1961. 90 p. (Vsесоiuзnyi nauchno-
issledovatel'skii institut neftekhimicheskikh protsessov. Trudy,
no.4)

(MIRA 14:7)

(Oxidation)

ARTYUKHOV, I.M.

Methods for the development of experimental data in modeling the processes of heterogeneous chemical transformation of substances. Khim.i tekhn.topl.i masel 6 no.12:53-57 D '61. (MIRA 15:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov.
(Chemical reactions) (Chemical models)

ARTYUKHOV, I.M., DINER, I.S., VASIL'YEV, S.F., LAPIDES, A.A., MOSIN, A.M.

Production of olefins by pyrolysis of petroleum products.

Report presented at the 12th Conference on high molecular weight compounds
devoted to monomers, Baku, 3-7 April 62

GORISLAVETS, S.P. [Horyslavets', S.P.], kand. tekhn. nauk; KOZHAN, A.P.,
kand. tekhn. nauk; MAYOROV, V.I., kand. tekhn. nauk; MUKHINA, T.N.
[Mukhina, T.M.], kand. tekhn. nauk; ARTYUKHOV, I.M., kand. tekhn.
nauk

Block steam superheaters. Khim. prom. no.429-30 O-D '64.
(MIRA 18:3)

ARTYUKHOV, M.; TKACH, N.

Bank and the struggle with additions. Fin. SSSR 22 no.7:
81-83 Jl '61. (MIRA 14:7)

1. Starshiy kontroler-revisor Krasnodarskoy krayevoy kontory
Stroybanka (for Artyukhov). 2. Starshiy ekonomist Krasnodarskoy
krayevoy kontory Stroybanka (for Tkach).

(Banks and banking)
(Construction industry--Auditing and inspection)

KAKUYEVISTKIY, V.A. [Kakuievyst'kyi, V.A.], kand.tekhn.nauk; ARTYUZHOV,
M.A., inzh.

Building surfaces up by pulsation welding. Mekh. sil'. hosp. 11
no.9:3-5 S '60. (MIRA 13:9)
(Electric welding)

KAKUYEVITSKIY, V.A., kand.tekhn.nauk; ARTYUKHOV, M.A.

Fatigue strength of GAZ engine crankshafts. Avt.prom. 28 no.11:
34-36 N '62. (MIRA 16:1)

1. Ukrainskiy dorozhno-transportnyy nauchno-issledovatel'skiy
institut.

(Crankshafts and crankshafts—Testing)

TROYEPOL'SKIY, V.N., inzh.; DIVEYEV, P.A., inzh.; ARTYUKOV, M.I., inzh.

Electric contact welding in rail-welding trains, Trans. stroi.
13 no.8:14-17 Ag '63. (MIRA 17:2)

- ANALYSTS
1. KLEMENTOV, V.I.; ARTYUKOV, M.L.
2. USSR (600)
4. Electric Welding
7. Automatic welding of rods under flux, Eng. V.I. Klementov, M.L. Artiukov, Avtob.delo.
24 no. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

AUTHOR: Artyukhov, M.L. 20-110-2-1/60

TITLE: On a Method for Counting the Integral Points in n-Dimensional Polyhedra (Ob odnom metode scheta tselykh tochek v n-dimernykh mnogogrannikakh) SSSR

PERIODICAL: Doklady Akademii Nauk, 1958, Vol 118, Nr 2, pp 215-218 (USSR)

ABSTRACT: The author considers an n-dimensional integral point lattice and attributes according to a very complicated method a certain weight to each element of the lattice (lattice points and different-dimensional hyperplanes through the lattice points). The method then is extended to the polyhedra lying in such a "lattice space". The weight of a polyhedron thus defined proves to be additive for algebraic addition of the polyhedra. Under restriction to certain "special polyhedra" the author obtains as his main result the theorem: The weight of each special parallelohedron is equal to the n-dimensional volume of the parallelohedron. Three further theorems contain a generalization and corollaries of the fundamental theorem. As a special case one obtains Ehrhart's result [ref 1] on the number of integral points in the polygon with integral

Card 1/2

On a Method for Counting the Integral Points in n-Dimensional Polyhedra 20-116-2-1/60

corners. There is 1 non-Soviet reference.

PRESENTED: July 1, 1957, by I.M. Vinogradov, Academician

SUBMITTED: June 24, 1957

AVAILABLE: Library of Congress

Card 2/2

89984

16.1000

S/039/60/051/004/006/007XX
C 111/ C 333

AUTHOR: Artyukhov, M. M. (Ordzhonikidze)

TITLE: Formulas for the number of solutions of some systems
of linear diophantic inequalities

PERIODICAL: Matematicheskiy sbornik, v. 51, no. 4, 1960, 501-514

TEXT: The author considers the system

$$\begin{aligned} m_1 &\leq f_1 \leq M_1, \\ m_2 &\leq f_2 \leq M_2, \\ &\dots \dots \dots \\ m_n &\leq f_n \leq M_n, \end{aligned}$$

(1)

where $f_i = a_{i1}x_1 + a_{i2}x_2 + \dots + a_{in}x_n$, $i = 1, 2, \dots, n$. The determin-

$$D = \begin{vmatrix} a_{11} & \dots & a_{1n} \\ \dots & \dots & \dots \\ a_{n1} & \dots & a_{nn} \end{vmatrix} \text{ is } > 0.$$

Card 1/8

89984

S/039/60/051/004/006/007XX
 C 111 / C 333

Formulas for the number of . . .
 To the system (1) there corresponds an n-dimensional parallelogram P.
 The k-dimensional boundary parallelograms of P which are defined by
 k inequalities of the type (1) and by n-k equations $f_i = M_i$ are
 denoted by P_k . Let a_{ij} be integer; the greatest common divisor $d(i)$
 of the numbers $a_{i_1}, a_{i_2}, \dots, a_{i_n}$ is assumed to be equal to 1
 for all i. For the matrix

$$\begin{vmatrix} a_{i_1,1} & a_{i_1,2} & \cdots & \cdots & a_{i_1,n} \\ a_{i_2,1} & a_{i_2,2} & \cdots & \cdots & a_{i_2,n} \\ \cdots & \cdots & \cdots & \cdots & \cdots \\ a_{i_s,1} & a_{i_s,2} & \cdots & \cdots & a_{i_s,n} \end{vmatrix}$$

composed of $s(1 \leq s \leq n)$ different rows of (1), let $\sigma(i_1, i_2, \dots, i_s)$ denote the square root of the sum of the squares of all

Card 2/8

89984

S/039/60/051/004/006/007XX
C 111/ C 333

Formulas for the number of . . . highest determinants of the matrix; $d(i_1, i_2, \dots, i_s)$ the greatest common divisor of the highest determinants of the matrix. Let A_{ij} be the algebraic complement of a_{ij} in δ . Let $\tau(i)$ be the greatest common divisor of the $A_{i_1}, A_{i_2}, \dots, A_{i_n}$. Let $\tau(i_1, i_2, \dots, i_s)$ be the greatest common divisor of the $\tau(i_1), \tau(i_2), \dots, \tau(i_s)$. Let $\mu_i = \frac{M_i - m_i}{d}$.

For the volumes of P and P_k there hold the formulas

$$V(P) = \mu_1 \mu_2 \cdots \mu_n d^{n-1}, \quad (4)$$

$$V(P_k) = d^{k-1} \mu_{i_1} \mu_{i_2} \cdots \mu_{i_k} \delta(i_{k+1}, i_{k+2}, \dots, i_n). \quad (5)$$

The author gives a series of further auxiliary formulas with geometric interpretation.

In the following the author makes further restrictions. The system
Card 3/8

89984

S/039/60/051/004/006/007XX
C 111/ C 333

Formulas for the number of . . .

(1) is considered only for the case $\mu_i = \frac{\lambda_i}{\tau(i)}$, where λ_i are natural numbers. An integer solution satisfying (1) without equality signs is denoted as internal solution, all other integer solutions are denoted as peripheric solutions. The weight of an internal solution is defined to be 1, the weight of a peripheric solution which satisfies k equations is defined to be 2^{-k} . Let Φ be the sum of all weights of the solutions (weighted number of solutions). Let Ψ be the rigorous number of the solutions. If

$\mu_i = \frac{\lambda_i}{\tau(i)}$, then (1) is called a translated-integer system. If, moreover, the system $f_1 = M_1, f_2 = M_2, \dots, f_n = M_n$ is solvable in integers, then (1) is called integer.

Theorem I: For a translated-integer system (1) it always holds

$$\Phi = d^{n-1} \cdot \frac{\lambda_1 \lambda_2 \cdots \lambda_n}{\tau(1) \tau(2) \cdots \tau(n)} \quad (19)$$

Card 4/8

89984

S/039/60/051/004/006/007XX

C 111 / C 333

Formulas for the number of . . .

Corollary: If in (1) all the M_i are non-integer, then

$$\Psi = \delta^{n-1} \frac{\lambda_1 \lambda_2 \dots \lambda_n}{\tau(1) \tau(2) \dots \tau(n)}$$

Theorem II: If in the mixed system

$$m_1 \leq f_1 \leq M_1,$$

$$m_2 \leq f_2 \leq M_2,$$

.....

$$m_k \leq f_k \leq M_k,$$

$$f_{k+1} = M_{k+1},$$

$$f_{k+2} = M_{k+2},$$

.....

$$f_n = M_n$$

(20)

Card 5/8

89984

Formulas for the number of . . .

S/039/60/051/004/006/007XX
C 111/ C 333

it holds $M_i = m_i = \frac{\lambda_i \delta}{\tau(i)}$ for all $i = 1, 2, \dots, k$, and $M_i = \frac{\lambda_i \delta}{\tau(i)}$ for all $i = k+1, \dots, n$, where λ_i ($i=1, 2, \dots, n$) are natural numbers, and if to every integer solution of (20) there is assigned a weight 1 if the solution satisfies all the strict inequalities of the system, while to the solution there is assigned the weight $1/2^s$, if the solution satisfies s equations from the k first line of (1), then it holds

$$\Phi = \delta^{k-1} \frac{\lambda_1 \lambda_2 \dots \lambda_k}{\tau(1)\tau(2)\dots\tau(k)} d(k+1, k+2, \dots, n) \quad (21)$$

for the number of the solutions of (20) weightened in this way.

Theorem III: If (1) is an integer system, then

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Formulas for the number of . . .

$$\Psi = \sum_{k=0}^n \delta^{k-1} \sum_{1 \leq i_1 < i_2 < \dots < i_k \leq n} \frac{\lambda_{i_1} \lambda_{i_2} \dots \lambda_{i_k}}{\tau(i_1) \tau(i_2) \dots \tau(i_k)} d(i_{k+1}, i_{k+2}, \dots, i_n), \quad (22)$$

where for $k=n$ it is put $d(i_{k+1}, i_{k+2}, \dots, i_n) = 1$.Theorem IV: If (1) is integer and Ω the number of the solutions of the diophantic system of strict inequalities

$$m_1 < f_1 < M_1, \quad m_2 < f_2 < M_2, \dots, \quad m_n < f_n < M_n$$

then

$$\Omega = \sum_{k=0}^n (-1)^{n-k} \delta^{k-1} \sum_{1 \leq i_1 < i_2 < \dots < i_k \leq n} \frac{\lambda_{i_1} \lambda_{i_2} \dots \lambda_{i_k}}{\tau(i_1) \tau(i_2) \dots \tau(i_k)} d(i_{k+1}, i_{k+2}, \dots, i_n) \quad (25)$$

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Theorem V: If (1) is integer and δ free of squares, then

$$\Psi = \sum_{k=1}^n \delta^{k-1} \sum_{1 \leq i_1 < i_2 < \dots < i_k \leq n} \lambda_{i_1} \lambda_{i_2} \dots \lambda_{i_k} \frac{\tau(i_1, i_2, \dots, i_k)}{\tau(i_1)\tau(i_2)\dots\tau(i_k)} + 1,$$

$$\Omega = \sum_{k=1}^n (-1)^{n-k} \delta^{k-1} \sum_{1 \leq i_1 < i_2 < \dots < i_k \leq n} \lambda_{i_1} \lambda_{i_2} \dots \lambda_{i_k} \frac{\tau(i_1, i_2, \dots, i_k)}{\tau(i_1)\tau(i_2)\dots\tau(i_k)} + (-1)^n$$

There is 1 Soviet-bloc reference.

SUBMITTED: December 22, 1958

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Problem of the number of integral points in some tetrahedra. Mat.-
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(Aggregates) (Tetrahedra)